No 7

An account of the Diseases of Harrisburg Pa. and its vicinity, from July 1821 to July 1822 inclusive, which Joseph L Smith submits to the examination of the Medical Faculty of the University of Pennsylvania, for the degree of Doctor of Medicine.

Passed March 11th. 1823

An Account &c. &c.

The weather during the month of July was generally pleasant, accompanied with frequent showers of rain, the wind variable, and the mean height of the mercury at three O'clock, (agreeably to Fahrenheit's thermometer) was seventy nine degrees and a half. About the twelfth of this month, fevers began to make their appearance, both intermittent and remittent; but perhaps the number of the former was the greater. It appeared more particularly to seize on those who had been the subjects of its attack the preceding season, and in whom a strong predisposition to the disease still remained. On the twenty third and twenty fourth days of the month there fell a very considerable quantity of rain, so much as completely to saturate the ground; from this time the number of cases of fever began to increase.

During the month of August the weather generally was very warm, the mercury on the sixteenth stood as high as ninety two, and the mean temperature of the month was eigh-

ty one. The wind the greater part of the month was from the North West, the ground became very dry and dusty, no rain having fallen within the last twenty days. From this time sickness seemed to progress rapidly, which may we think very justly be attributed to the exhalations arising from the decomposition of vegetable substances. The uninterrupted heat of the sun for so long a time, acting on the vegetable matter and thereby causing more rapid putrefaction consequently the atmosphere becoming more loaded with miasmata. It has been sufficiently proven by writers on this subject, that the effluvia arising from putrid vegetable substances is a very productive source of fevers. However, when the heat of the sun is not with showers of rain, vegetable decomposition after a while ceases to progress and this for a time suspends the remote cause of the disease; This argument appears to derive some support from the fact, that after the extreme warm weather unaccompanied with rain had continued for a certain time, there was a suspension of disease at this place, which was immediately renewed on the accession of wet weather.

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be a suspension of the disease, or rather no new cases occurring; after this date however, the disease appeared to be on the increase during the remainder of the month.

On the tenth of the following month, September, the mercury stood at eighty nine, and fluctuated between that and sixty six during the remainder of the month. The weather this month was cloudy and attended with frequent showers of rain. This appeared to give activity to the causes already existing in promoting the disease, which now began to extend rapidly, new cases occurring every day. About the twentieth the disease evidently began to decline, though not ascenbable to any visible cause, as the weather generally was very warm for this season of the year. Towards the close of the month however the disease again began to increase, and as no cause could be assigned for its remission, neither, could any be ascribed to which its increase might be attributed: though the weather became cooler, it had no influence in arresting the disease, on the contrary it appeared to increase the fever, but without affecting materially its character.

The weather of the following month, October, was

variable but the transitions were not very sudden; the mercury fluctuated between seventy six and forty nine during the month. The wind the greater part of the month was from the North West, which generally indicates an absence of rain; the weather however was pleasant for the season. Fevers appeared to be on the increase in the early part of the month, but with an alteration in their character; the number of intermittents increased, and remittents were more disposed to be protracted in their course, and to run into typhus. The fevers of this period appeared to be of a lower grade than during the early part of the season; the arterial action was much less and the disease was always protracted for a much longer time. About the twenty second of the month the fever began to decline, but very few new cases having occurred within the last four days. Those of the remittent and continued form began to change into intermittent. Food appeared on the eighteenth, and from this time the fever began to subside rapidly, and by the end of the month had in a great degree disappeared.

In noticing these forms of fever and the other dis-

cases occurring within the period we have prescribed to ourselves, it is not our intention to enter into any discussion relative to their various causes &c.; but merely to give some account of their peculiar symptoms and the remedies that proved most successful in their treatment.

These forms of fever were all of a highly billious character, and their very general prevalence is novelly in this district of country. It did not confine itself to any particular age or sex but attacked all alike indiscriminately. In some places so generally did it prevail, that scarcely a family escaped, and in some cases every member of the family was confined at the same time and rendered unable to lend each other the smallest assistance. This was more particularly the case in some of the vallies above this place which had heretofore been remarkably healthy.

This disease did not observe any regularity in the early symptoms of its attack, sometimes it came on without any premonitory symptoms, but more frequently some slight indisposition was present for some days previous to a confirmed attack. There was a peculiarity in the manner of

its attacks in some cases, which I do not remember to have seen noticed by any writer on the subject, namely: the patient often felt some degree of indisposition for several days, but on the day of the attack, or the day preceding it, would feel perfectly well. More frequently however the patient would appear dull and languid, have an aversion to active exercise, head ache, pains in the back and extremities, a sensation of weariness, sighing and yawning; there was also loss of appetite, nausea, sickness at the stomach, and frequently vomiting of billious matter. The tongue was coated with fur, which was sometimes white, but more frequently of a billious appearance. In some instances the fever was of the intermittent type and tertiaro order having very severe exacerbations every other day but always leaving the patient with a considerable degree of fever during the interval of the paroxysms. The pulse was frequent, quick, and full, but not commonly hard.

Treatment:

Where the disease would admit of it, for it by no means generally did, the treatment was commenced by bleeding, and if necessary it was repeated. This had the effect of calming irritation, lessening febrile excitement, and laying the system

ven to subsequent remedies which always appeared to operate more effectually. After this, the next step in the treatment was to give an emetic, and for this purpose the tartarised antimony was preferred; but if the patient was of a delicate habit the ipecacuanha was employed, sometimes exhibited alone, at other times in combination with the tartarised antimony; a scruple of the former with one or two grains of the latter was usually given at a dose.

By the exhibition of an emetic in the early stage, the fever was often completely arrested and always rendered more manageable in the subsequent stages. From the highly bilious nature of the disease, and the speedy accumulation of bile in the stomach, emetics were peculiarly serviceable in the treatment.

The emetic was followed by the mercurial cathartics, as calomel and jalap or calomel and epsom salt. A favorite prescription when the stomach was irritable, was twelve or fifteen grains of calomel divided into three parts, one of which was given every hour; two hours after taking the last, the following mixture was given

℞ Epsom salt ℥iv

Calcined Magnes. ℥ss

Ess. of peppermint gtt. xx

Water ℥iv M.

An ounce of this mixture was taken every hour until it operated freely. This prescription had a happy effect in the evacuation of the bile, as it produced copious evacuations without inducing much debility. The mercurial, followed by the saline purgatives, were continued till all offensive matter was removed, and the stools began to assume a healthy appearance. The system commonly appeared depressed so long as this offensive matter remained in the bowels, and as a natural consequence rose after its removal, and it was frequently necessary to repeat the purging during the whole course of the treatment.

When the stomach and bowels were completely evacuated, if an intermission did not take place, diaphoretic medicines were resorted to, as the antimonials, the saline or nitrous mixture, either alone or combined with the spirits of nitre. The spirits of nitre alone in doses of a teaspoonful every hour, assisted

with copious draughts of an infusion of Virginia snakeroot was a very effectual diaphoretic. When it was desired to have the spirits of nitre more stimulating, camphor was dissolved in it.

Sometimes there was so much irritability of the stomach present, as to prevent the exhibition of cathartics, every thing of the kind being rejected by vomiting. In these cases it was first necessary to calm the irritability of the stomach, and often small doses of calomel, half a grain or a grain every hour would promptly relieve it, tea and lime water and milk assisted by fomentations to the stomach, were the remedies usually employed. When all other means failed, a blister was applied over the whole epigastric region, which were seldom failed to calm the stomach and enable it to retain the medicine. In some cases of this kind a small quantity of blood taken from the arm, had a very good effect in tranquilizing the stomach; it was necessary to abstain as much as possible from drink, as it always aggravated the disorder, this was sometimes hard to be done as the thirst was frequently insatiable.

In some instances where the stomach was affected with nausea and sickness, a peculiar sympathetic affection was

communicated to the lungs, the respiration became oppressed and difficult, together with tightness across the chest, this was very speedily relieved by combinations of opium and camphor, in the proportion of three of the former and half a grain of the latter, every half or every hour; brandy toddy likewise had a very good effect in relieving it.

The drinks principally used during the fever, were sage and balm teas, toast water, lemonade tamarind water, and apple water. This last is best made, by pouring boiling water on raw apples cut into thin slices, this will be found more pleasant than when the apples are first roasted.

As soon as an intermission was obtained, tonics were resorted to, and the powdered Peruvian bark was preferred. It was given in substance if the stomach would receive it, if not it was given in decoction combined with an aromatic. It sometimes happened, that the bark could not be used, evidently tending to depress the stomach, in these cases an infusion of quassia or colombo was substituted.

If the fever still continued after the stomach and bowels were properly evacuated, blisters were resorted to,

and at this venture were unequivocally useful, and very frequently brought on an intermission. When the fever had been neglected in the early stage, or improperly treated, it was apt to run into typhus, and was then met with its appropriate remedies.

The plan of treatment just described was very generally successful but during convalescence a great degree of care was necessary to prevent a relapse.

The months of November, December, and January continued remarkably healthy, there was scarcely disease of any kind except relapses of intermittents the weather was settled and cold and small quantities of snow fell at different times. The greater part of February continued healthy, but not as much so as the three preceding months, the weather towards the latter part became changable, predisposing to inflammatory diseases, there were principally catarrhal affections among adults and cynanche among children. The mercury fluctuated between thirty one and fifty seven degrees during the month — On the eighteenth a snow fell which was about eighteen inches deep.

The month of March brought on more disease than had prevailed all the winter months, this no doubt was owing to the changeable state of the weather the mercury rising considerably some days, and falling as rapidly in a few days max, the mean temperature of the month was fifty two degrees. The diseases of this month were all inflammatory, a number of cases of inflammation of the throat occurred, particularly of the tonsils, this however was not an obstinate disease, pretty copious venesection so as to produce some tendency to syncope, purging with the neutral salts, and a blister applied to the throat, were generally sufficient to subdue it.

But a disease made its appearance about the same time of a more serious nature, this was bilious pleurisy it commences towards the latter part of February and prevailed to a considerable extent during the months of March; this disease was more particularly confined to the town. The name "bilious" has been added to this species of pneumonic inflammation, from the circumstance of its having the symptoms of bilious fever superadded to those of pleurisy, and the treatment partook of that which was proper in both these diseases

when occurring separately. There are several ways in which pneumonic inflammation may terminate, either by resolution suppuration, or gangrene whether either of the two latter ever took place, we are unable to say, as examinations after death, were never permitted, but the first very rarely occurred; if left to itself the disease, with few exceptions, would terminate in death.

"Diseases of this character rarely attack persons under the age of puberty, and are more generally confined to the robust. This species on the contrary, was not confined to any particular age or sex: I have seen the disease in children under twelve years of age; and the weak and debilitated were more frequently the subjects of its attack than the robust. There was one description of patients that was more subject to the disease than any other, and these were such as had had severe attacks of bilious, over the preceding fall, and in whom a strong bilious predisposition still remained. This vast secretion of bile was a peculiarity attending almost every disease which made its appearance, nor was the bilious diathesis confined to the sick, but was also visible in many in whom no symptom of indisposition was evident. The tunica adnata was often tinged of a bilious hue in persons

apparently in persons ~~apparently~~ in perfect health. It may reasonably be supposed that such persons would have a very strong predisposition to bilious affections. This highly bilious character of a great number of our diseases, called more for generations than the lancet; though in some cases it was a very useful auxiliary and in this it was absolutely necessary.

In this disease there was always pain on the side and the left was the side most frequently affected; there was cough, difficult respiration, nausea, and gastric distress; headache, timid countenance, the eyes appeared flushed, and the tongue was coated with bilious matter and very frequently there was a considerable degree of fever present. The cough was generally moist and the matter expectorated was streaked with blood; the pain in some cases was very acute, so as to cause great distress to the patient and prevent him from lying on his side; in other cases the pain was more obtuse and sometimes the lungs appeared to be sympathetically affected; the primary disease being in the liver.

The pulse was frequent, small, and quick but very seldom hard. This state of the pulse was supposed by

some practitioners to forbid the use of the lancet, and in some cases this error proved fatal to the patient, though the opposite extreme was equally improper.

In treating this disease we adopted as our guide the rule, that "inflammation of the lungs always requires bleeding", and when called to a case always commenced the treatment by venesection, (unless forbidden by the advanced stage of the disease or the prostration of the patient) which in violent cases, was continued until it produced a remission of the pain or symptoms of approaching syncope began to appear; and it was repeated as often as the pain returned. Although it sometimes required a repetition of the lancet for two or three times, the quantity of blood taken was but small. It sometimes happened that but a small quantity could be taken at the first bleeding, by this the pulse was liberated and the next bleeding was more copious. After the bleeding we gave a dose of calomel and ipecacuanha, ten or fifteen grains of the former to twenty of the latter; which produced both emetic and cathartic effects, thus completely evacuating the stomach and bowels.

If the pain in the side, respiration, and cough were not considerably relieved, the lancet was again resorted to but in smaller quantity and the bowels evacuated by epsom salts either alone or combined with magnesia.

This species of pleurisy, though it required the bowels to be completely evacuated, but like all other kinds of pneumonic inflammation, would not bear active purging. As soon as the more violent symptoms were subdued, a warm blister was applied directly over the seat of the pain. Along with the remedies mentioned we gave small doses of calomel and ipecacuanha combined — two grains of the latter and one of the former, every two or three hours; by this means the system was brought under the influence of mercury in the early stage of the disease. There was something striking in this combination, it had the effect of subduing the inflammatory symptoms, relieving the cough, and promoting expectoration. When the cough became loose the following expectorant mixture was used.

℞. Polyg. Seneka
Extract Liquorice
Gum Arab.
Sal Tart. ā.ā. ℥ij M.

Half a pint of boiling water was put on this and allowed to simmer at the fire for fifteen minutes, the liquor was then strained off and a table-spoonful taken every two or three hours. Together with these, mucilaginous drinks given, as gum arabic tea, flaxseed tea, &c.

Sometimes the cough remained dry, with oppression at the breast, and pernicious expectoration; in these cases moderate bleedings, together with small doses of ipecac. acetanhia, calomel, and opium seldom failed to give relief.

This method of treatment appeared particularly well adapted to the disease as it appeared here, nor could any plan be more successful.

Towards the close of the month this disease began to decline, and in the course of the following month had almost wholly disappeared. The weather this month (April) was frequently cool, but pleasant; there were frequent showers of rain and the medium height of the mercury for the month, was fifty nine.

The principal diseases of this month were intermittents and these were rather to be considered relapses, than

new attacks, as they were principally confined to those who had had the disease the preceding fall. In some instances they proved exceedingly intractable to all the usual remedies, they only would suspend the disease for a time, leaving it always liable to return on the least exposure to wet or cold. In some of these cases the eupatorium was found to answer better than the barks: it was first given in strong infusion, warm, so as to vomit, and afterwards cold to act as a tonic

In the months of May there were a number of cases both of intermittent and remittent fevers, these were treated in the same manner as in other seasons. Towards the close of the month these had nearly subsided

The month of June was warm, the mercury at times standing as high as eighty nine, and fluctuated between that and sixty five during the month. There were frequent showers of rain but withal, the ground became very dry and the streams of water low

The diseases of this month were principally bowel affections, these however were of a mild nature requiring but little medicine for their removal. But notwithstanding

the mildness of these complaints, they appeared to be the prelude to a disease of a more serious character which began to prevail the following month, July. This month was very warm, the mercury on the eighth stood at nineteen two and seldom was below eighty; the ground became very dry although there were several showers of rain. Towards the latter part of the month dysentery began to prevail, and extended so rapidly as to excite great alarm; it prevailed more extensively in the vicinity of this place than in the town itself, though it was by no means exempted. In some directions the disease moved along visiting every family, and very frequently the patients fell victims to the violence of the disease. This was more particularly the case with children. It had completely supplanted the fever which usually commenced at this season, as at this time scarcely a case was to be found unconnected with dysentery. This fact tends to confirm the idea of dysentery being a fever turned in upon the bowels

Many of the fatal terminations of this disease were owing to neglect in making early application for medical aid. The cure was attempted by endeavouring to check the frequency

of the evacuations, and for this purpose, a variety of domestic remedies were employed such as brandy, and sugar, strong decoctions of oak bark, and other equally improper remedies; when this was insisted on, the patient frequently died. Experience at length convinced them, that a regular course of medicine was the only means of saving the patient.

The early symptoms of the disease were very similar to those of fever. In many cases the disease was preceded by loss of appetite, flatulency, costiveness, sickness at the stomach, and sometimes vomiting. At other times, it commenced with chills, which were followed by fever of the remittent type: afterwards the griping and frequent desire to stool came on. In some cases, the disease commenced with diarrhoea, but very frequently, the griping and increased desire to stool was present from the beginning.

The appearance of the stools was various, most frequently they consisted of mucus mixed with blood, and in some cases, to use a popular description among the people, they resembled the "washings of meat."

The natural discharges of the bowels were entirely

suppressed; when there were discharges from the bowels, other than the peculiar dysenteric discharges, it was either in the form of scybala and these of a dark bilious appearance, or the discharges were natural in consistence, but of a dark red colour, and very offensive to the smell.

The treatment was usually commenced by giving a dose of calomel and rhubarb, and the calomel frequently had to be repeated. The epsom salts were then resorted, to and continued until the bowels were thoroughly evacuated. In some cases castor oil was used, but we do not know that it possessed any advantage over the epsom salts. Afterwards such medicines were employed as would calm irritation, and determine to the surface; and for this purpose, the following prescription of Dr Chapman was unequalled.

℞ Calomel gr x.aj

Ipecac. gr viij

Quam Opium gr. iv M. To be made into eight powders or pills one of which was given every

two, three, or four hours. This promotes the secretions from the bowels and improves the excretions.

Topical remedies were also used, as a flannel wrung out of the spirits of turpentine and applied over the belly. When it could be had, the warm bath was used. If the disease did not now yield, a blister was applied to the abdomen.

There were other symptoms demanding attention, as tormina and tenesmus, which sometimes prevailed through the whole course of the disease, causing much distress to the patient. These were often relieved by the oleaginous mixture, thus. ℞. Castor Oil ℥j

Gum Arab. ℥ij

Loaf sugar ℥j

Laudanum gtt. LX

Water ℥iij M. Of this a table spoonful was given every two or three hours. Where there was much irritability of the stomach the following was a valuable prescription

℞. Castor Oil ℥j

The whites of two eggs. These were rubbed together in a mortar until ~~mixed~~ thoroughly mixed, afterwards was added,

Loaf sugar ℥j

Laudanum gtt LX.

Lime water ℥v. M. This was given in the same manner as the last.

Sometimes the stomach was too irritable to bear any of these remedies; in these cases anodyne injections were substituted But the best remedy we have ever seen, was an injection of half a pound or a pound of melted fresh butter. The butter was obtained fresh by melting common butter, and pouring it into water, which completely separates the salt from it

The very frequent straining at stool, was apt to cause a protrusion of part of the rectum; in children, this a very troublesome complaint and one that was particularly apt to happen It was reduced by applying a linnen rag, greased with lard, to the part and pressing it gently upwards. To restore tone to the bowels an infusion of colombo or angustura was given

Dysentery is generally an inflammatory disease requiring in most cases, a partly free use of the lancet; but as it appeared in this place, it would not bear much bleeding. In most cases there was very little fever, and the appearance of the patient denoting billious accumulation, in addition to the peculiar dysenteric discharges, seemed more particularly to demand the operation of purgatives, and in the great majority of cases, the intention was completely answered by them.

The disease frequently terminated in diarrhœa, and here the cretaceous julap in combination with kino or catechu, was very useful. But a remedy which frequently succeeded when all the usual remedies had failed, was the sugar of lead combined with opium and ipecacuanha, thus.

℞. Sugar of Lead ℈j

Opium gr. iss

Ipecac gr. viij M. Divided into eight powders one of which was given every three or four hours

The diet required strict attention, an error in this

respect was often followed by a relapse of the disease. It consist-
ed of gum arabic, elm mucilage, arrow root, tapioca, and boiled
rice, afterwards rye mush and milk were allowed; but the patient
had to return very gradually to his former mode of living.—